GOAL 2: Clean and Safe Water

Ensure drinking water is safe. Restore and maintain oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife.

Over the past 30 years, EPA and its federal, state, and tribal partners have made significant progress in protecting and restoring the nation's waters. Today, more Americans have safe, reliable, and affordable drinking water, and people can fish, swim, and travel safely in rivers that were once polluted. Challenges remain, however, and EPA is using a variety of strategies to address them. During FY 2004, EPA focused on developing and applying innovative, flexible approaches, such as trading and watershed-based permitting, that will promote efficiencies and yield improved results. The Agency also worked closely with states and tribes to improve data, so managers have the information they need to target actions to protect human health and aquatic ecosystems most effectively. New tools—such as the first complete list of beaches in coastal and Great Lakes States, an expanded listing of waters where fish are safe to eat, and a new national study that uses comparable results to report stream conditions across the United States—are laying the foundation for improved reporting and results in the coming years.

EPA works with states and tribes to improve data quality and develop new tools to improve reporting and results.

Drinking Water

EPA has established health-based drinking water standards for more than 90 contaminants.[1] To help drinking water systems implement the standards for contaminants posing the greatest risk to human health, EPA, states, tribes, and key stakeholders work together to provide water systems with extensive technical assistance and training. Over the past decade, the Agency and its partners have made significant progress in providing the public with drinking water that meets health-based standards. While final FY 2004 drinking water data will not be available until January 2005, EPA expects to maintain these gains.

Given the many new standards and regulations which have been implemented since 1998 and continue to be implemented, however, EPA does not expect straight line increases in the number of community water systems that comply with all standards and regulations throughout the year, or in the corresponding percentages

of the populations they serve. For example, EPA and states project that the 2005 goal, 93 percent of the population is served by systems that meet all federal health-based standards all the time, will not be met. The Agency recognizes that many systems, especially small systems, will be struggling to implement the revised arsenic in drinking water standard and may not be in compliance with this standard for the entire year. Consequently, in FY 2004, EPA worked with states to determine which public water systems will need help in implementing the arsenic rule and the suite of microbial and disinfection/disinfectant byproducts rules that become effective in 2005, 2006, and 2007. EPA estimates that, as a result of concerted technical assistance, training, and other capacity-building efforts, the gap between its annual goals and performance results will narrow in FY 2007, and the Agency will reach its FY 2008 goal.

EPA and the Food and Drug Administration issued the first joint federal fish advisory.

Recently, verification of state data and other quality assurance analyses have called into question the accuracy of EPA's estimates of accomplishments in protecting drinking water. Efforts are underway to improve the data and the accuracy of EPA reports.[2]

Fish and Shellfish

In FY 2004, states, territories, and tribes accelerated monitoring of fish tissue for mercury and other contaminants. As a result, as of December 2003, 47 new guidelines identifying specific water bodies from which the public can safely consume fish were added to those reported for 2002. Overall, 35 percent of total lake acres and 24 percent of river miles in the United States are now under consumption advisories; the increase in waters under advisory reflects statewide mercury advisories issued by Montana and Washington and the addition of rivers to Wisconsin's statewide advisory. In addition, Hawaii issued a statewide advisory for its entire coastline, and the Cheyenne River Sioux Tribe issued an advisory on all of its tribal waters.[3] Most recent advisories involved mercury, though U.S. emissions of mercury have declined significantly since 1990.[4]

In FY 2004, in the first such cooperative effort of its kind, EPA and the Food and Drug Administration issued a joint federal fish advisory. The agencies shared their data and expertise to develop three recommendations for reducing exposure to the harmful effects of mercury in fish. By following the recommendations, women of child-bearing age and children can safely enjoy the nutritional benefits of fish and shellfish while avoiding risks associated with methylmercury.[5] During FY 2005, EPA will continue working with states, tribes, and health-care providers to disseminate this information to the public.

Beaches and Recreational Waters

Each year, Americans take an estimated 910 million trips to beaches, where they spend approximately $44 billion.[6] During FY 2004, EPA took important steps to protect public health and the quality of the nation's beaches. To fulfill provisions of the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000, EPA proposed health-based federal water quality standards for the 25 states and territories bordering Great Lakes or ocean waters that had not strengthened their standards.[7] South Carolina, Maryland, and Delaware have already adopted these criteria. Ensuring that the public has current information on the safety of recreational waters is also a high priority for EPA. In April 2004, the Agency published the first "List of Beaches" on U.S. coastal and Great Lakes waters.[8] This comprehensive list will be critical for making information accessible to the public and for tracking results over time. In addition, during FY 2004 for the fourth consecutive year, EPA provided grant funding to support coastal and Great Lakes states, tribes, and territories in monitoring beaches and notifying the public about beach conditions.[9]

EPA proposed water quality standards to protect public health and the quality of our beaches.

Water Quality

To protect water quality and restore impaired waters, EPA, states, and tribes employ a watershed approach, enabling them to improve collaboration and information sharing and leverage resources. To be successful, water programs must have the comprehensive, consistent data they need to manage wisely, and they must apply the tools provided them by the Clean Water Act efficiently and effectively to address pollution from point and nonpoint sources of pollution.

Data on the number of watersheds with 80 percent or more of assessed waters meeting water quality standards are reported every 2 years; EPA expects to complete the analysis of states' 2004 data by the end of FY 2005. However, the Agency does not expect to meet its FY 2005 goal of 500 watersheds. Improved state monitoring and reporting is providing a better understanding of watershed condition, and EPA and states recognize that improving water quality on a watershed basis is challenging. The Agency and its partners are taking steps to improve results by increasing monitoring, encouraging watershed-based permitting and development of total maximum daily loads, increasing efficiency by identifying the most environmentally significant permits and setting permitting priorities from a watershed perspective, and helping states and tribes

Long Island Sound Nitrogen Loading Reduced

A study administered by EPA Regions 1 and 2 identified nitrogen pollution that results in hypoxia (low levels of dissolved oxygen) as the highest priority for restoring the Long Island Sound. In response, Connecticut and New York are using flexible, innovative strategies to upgrade wastewater treatment plants to remove nitrogen. In 2004, Connecticut continued its nitrogen pollutant trading program, and New York finalized additional bubble permits. Both approaches set firm, enforceable targets for reducing nitrogen, but provide flexibility in achieving them. As a result of upgrades to date, wastewater treatment plant discharges have decreased nitrogen loading by 25 percent from baseline levels.

Photo: National Oceanic and Atmospheric Administration/Department of Commerce

Collaboration on NPDES Permits Protects Chesapeake Bay

To control point-source pollution of the Chesapeake Bay watershed, EPA has led a collaborative effort to issue appropriate NPDES permits—consistent with Clean Water Act requirements and *Chesapeake 2000* goals—for discharges of nutrients to the Bay. After coordinating extensively with the seven states comprising the watershed, EPA issued a draft comprehensive strategy in July 2004. The Agency will finalize the strategy in FY 2005, following public review. The strategy has been the subject of considerable attention by the regulated community, environmental groups, and the press, and many have recognized EPA's leadership in moving this essential effort forward.

Photo: National Oceanic and Atmospheric Administration/Department of Commerce

improve the information available on water conditions and sources of impairment.

A cost-effective, scientifically sound system for obtaining national water quality data is crucial for detecting pollution problems, managing effectively, and assessing progress in improving water quality. During FY 2004, EPA continued to provide states with funding and technical support to enhance and expand monitoring. The Agency worked with states to conduct the Wadeable Streams Assessment, the first national study of the condition of wadeable streams throughout the United States. Survey results, available in 2005, will be comparable across all states in the contiguous United States, allowing state and regional biologists to consider methods and select approaches appropriate for their areas. The Agency's investment in state monitoring programs not only provides the new data, but also will support future decision making under a wide range of federal and state programs.

FY 2004 marks the first year since 1992 that EPA is not under a consent decree for issuing effluent guidelines. During FY 2004 EPA published final effluent guidelines for meat and poultry, construction and development, and aquaculture.[10] The meat and poultry processing effluent guideline will reduce pollutants produced by these operations by an estimated 30 million pounds per year.[11] In addition, new regulations that EPA issued in 2004 for large power producers will protect more than 200 million pounds of aquatic organisms annually from death or injury from cooling tower intake structures.[12] The Agency also published the *2004 Effluent Guidelines Program Plan*, which will direct the effluent guidelines program over the next 2 years.[13] During FY 2004, National Pollution Discharge Elimination System (NPDES) permits implementing effluent guidelines prevented the discharge of approximately 136 million pounds of pollutants into the nation's waters, for a cumulative total of 2.3 billion pounds reduced since 1999.[14] EPA expects the reduction in pollutant loadings to increase as the Agency continues to implement the revised Concentrated Animal Feeding Operation regulation and to focus on the most environmentally significant permits. EPA's collaboration with the U.S. Department of Agriculture and the Association of State and Interstate Water Pollution Control Administrators is key to achieving NPDES program goals.

New effluent guidelines will reduce pollutants discharged from meat and poultry processing operations by an estimated 30 million pounds per year.

Throughout FY 2004, EPA promoted innovative approaches to streamline permitting and other administrative processes and improve results. Under the Permitting for Environmental Results (PER) initiative, for example, EPA and its partners identify the most environmentally significant permits in and among watersheds and set permit priorities accordingly. Now in its second year, PER is improving the integrity of the process for issuing permits and, more importantly, is providing an approach to focus on priority permits that will achieve the greatest environmental benefit and make the most of valuable resources. To further watershed-based permitting, in FY 2004 EPA issued the Watershed-Based NPDES Permitting Implementation Guide[15] and began drafting complementary technical guidance that will facilitate watershed-based permitting.[16]

EPA is implementing a strategy for sustainable infrastructure that will enhance the operating efficiency of water and wastewater systems. The strategy is based on four related components: better asset management, full-cost pricing, efficient water use, and watershed-based management. Employing these sustainable management techniques can prolong the lives of existing utility systems and provide clean water at reduced costs.

EPA is also promoting an Environmental Management System (EMS) approach to help drinking water and wastewater utilities operate more efficiently to reduce adverse impacts on the environment. EMS practices enable an operation to evaluate its impact on the environment and reduce harmful effects by increasing energy efficiency and conserving resources. In FY 2004, collaborating with others, EPA produced two guides: *Achieving Environmental Excellence: An Environmental Management Systems Handbook for Wastewater Utilities*[17] and *Continual Improvement in Utility Management: A Framework for Integration*.[18] These guides provide practical step-by-step information on developing a high-quality EMS, advice on integrating systems to continuously improve operations, and case studies of successful systems.

Finally, EPA's research programs in FY 2004 continued to supply the information needed to set and implement drinking water and water quality standards. Researchers explored the performance and cost of commercially ready arsenic treatment technologies for small water systems and provided information on managing residuals from arsenic treatment, determining the effects of the distribution system on treated water, and optimizing treatment processes. To support the Wadeable Streams Assessment, EPA also evaluated bioassessment methods and tools used to assess streams and rivers in New England.

Schuylkill Action Network Protects Water Quality

The Schuylkill Action Network, one of EPA's Targeted Watershed Initiative grant recipients for FY 2004, is accelerating source water and watershed protection in the 130-mile Schuylkill River, a drinking water source for over 1.5 million people in the Philadelphia area. Organized by EPA, the City of Philadelphia Water Department, and the Pennsylvania Department of Environmental Protection, the Network is working with more than 50 public and private organizations to address acid mine drainage, agricultural runoff, storm water runoff, untreated sewage discharges, and combined sewer overflows that threaten water quality. The Network has secured funding for community sewer systems, implemented a storm water demonstration project in the Wissahickon watershed, and diverted stream flow from an abandoned mine tunnel that was discharging metals to the river.

Goal 2: Clean And Safe Water

Annual Performance Goals Met:	7
Annual Performance Goals Not Met:	3
Data Available After 11/5/04:	3

FY2004 Obligations (in thousands):	
EPA Total:	$10,155,381
Goal 2:	$3,840,600
Goal 2 Share of Total:	37.8%

FY2004 Costs (in thousands):	
EPA Total:	$8,837,375
Goal 2:	$4,012,619
Goal 2 Share of Total:	45.4%

Strategic Objective: Protect human health by reducing exposure to contaminants in drinking water (including protecting source waters), in fish and shellfish, and in recreational waters. FY 2004 Cost (in thousands): $1,313,748 (32.8% of FY 2004 Goal 2 Total Costs)

Progress Toward Strategic Objective: In collaboration with states, tribes, and local governments, EPA is making steady progress in protecting human health by reducing contaminants in drinking water, in fish and shellfish, and in recreational waters. Although final FY 2004 drinking water data will not be available until January 2005, EPA expects that the gains made over the past decade will be maintained. Through concerted technical assistance and training, as well as other capacity development activities, we anticipate that the gap between the planned targets and actual achievements will narrow in FY 2005 and EPA will achieve the 2008 drinking water protection goal.

States, territories, and tribes are increasing monitoring activities of fish tissue for mercury and are communicating this critical information to the consuming public, and making progress toward meeting the 2008 goal. EPA also continues to provide the public with information about the quality of recreational waters and anticipates resolving the technical difficulties with eBeaches in FY 2005.

APG 2.1	Source Water Protection	Planned	Actual
FY 2004	**Advance states' efforts with community water systems to protect their surface and ground water resources that are sources of drinking water supplies.** Goal Met.		
	Performance Measure:		
	Number of community water systems and percent of population served by those CWSs that are implementing source water protection programs.	**7,500 25%**	**13,891 42%**
FY 2003	39,000 community water systems (representing 75% of the nation's service population) will have completed source water assessments and 2,600 of these (representing 10% of the nation's service population) will be implementing source water protection programs. Goal Met.	2,600 10%	6,570 25%

FY 2004 Result: The states and EPA exceeded the goal, resulting in more community water systems (CWSs) implementing best management practices to address potential sources of contamination and further protect drinking water supplies. These source water assessments, authorized in the 1996 Amendments to the Safe Drinking Water Act to be conducted by the states, consists of six steps: (1) delineating the water supply, (2) inventorying actual and potential sources of contamination, (3) determining the susceptibility of potential sources, (4) informing the public, (5) developing a management plan for high risk sources of contamination, and (6) developing a contingency plan for alternative drinking water supplies in the event of wide- spread contamination. States continue to assess and identify potential sources of contamination that could endanger or contaminate sources of drinking water supplied by the nation's 53,000+ CWSs. Additional information on the Source Water Program is available at http://www.epa.gov/safewater/protect/assessment.html.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 25.

FY 2003 Result Available in FY 2004: Data for 2003 was incomplete; not all states reported by January 2004. EPA ensured that the data collection process for 2004 reporting was corrected.

APG 2.2 Safe Drinking Water		Planned	Actual
FY 2004	Population served by community water systems will receive drinking water meeting health-based standards promulgated in 1998.	85%	Data avail 2005
FY 2003	Same goal. Goal Met.	85%	96%

FY 2004 Result: To protect the nation's public health through safe drinking water, health-based standards for both chemical and microbial contaminants must be implemented by all 53,000+ community water systems. Pertinent rules for this measure include the Filter/Backwash Rule, Stage 1 Disinfections Byproducts Rule, and the Surface Water Treatment Rule (LT1 SWTR), which were promulgated in or after 1998. At this time, data collection is still in progress. Additional information on the health standards and regulations for drinking water is available at http://www.epa.gov/safewater/standards.html.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 26.

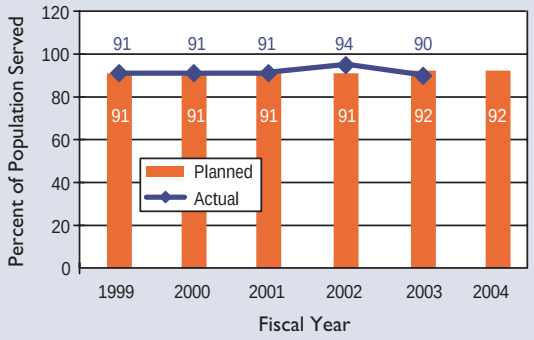
FY 2003 Result Available in FY 2004: Data reported by states to EPA to date show that the percentage of the population served by community water systems which meet all health-based drinking water standards increased from 79% in 1993 to 96% in 2003 which met drinking water standards promulgated in 1998 was 96% in 2003.

APG 2.3 Safe Drinking Water		Planned	Actual
FY 2004	Population served by community water systems will receive drinking water meeting all health-based standards, up from 83% in 1994.	92%	Data avail 2005

FY 2004 Result: All health-based standards and regulations that were promulgated prior to 1998 were in effect in 1994. The population supplied drinking water by community water systems that have had no health-based violations in that year is the indicator for ensuring safe drinking water. Data for this measure will be available in 2005. Additional information on standards and regulations for public drinking water systems can be found at: http://www.epa.gov/safewater/standards.html.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 26.

Population Served by Community Water Systems Will Receive Drinking Water Meeting All Health-Based Standards, Up from 83% in 1994



FY 2003 Result Available in FY 2004: Although the vast majority of the nation's community water systems supplied drinking water that met all health-based standards, some very large systems serving a large number of people (e.g., New York City and Puerto Rico) reported violations during the year. For example, even though the New York City system was out of compliance for just a few hours, it is reported as a violation for the entire year. As a result the goal was not achieved. The Agency is pursuing ways to account for these temporary noncompliance events to more comprehensively and accurately reflect the public health benefits over the entire year.

APG 2.4 River/Lake Assessments for Fish Consumption		Planned	Actual
FY 2004	Reduce consumption of contaminated fish by increasing the information available to states, tribes, local governments, citizens, and decision-makers. Goal Met.		
	Performance Measures:		
	—Lake acres assessed for the need for fish advisories and compilation of state-issued fish consumption advisory methodologies (cumulative).	35%	35%
	—River miles assessed for the need for fish consumption advisories and compilation state-issued fish consumption advisory methodologies (cumulative).	16%	24%

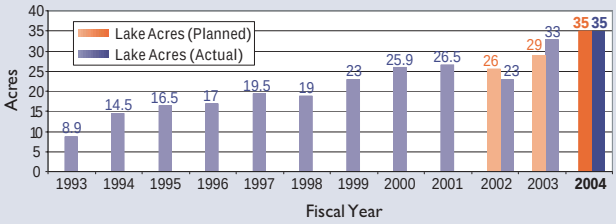
APG 2.4 River/Lake Assessments for Fish Consumption *(continued)*

FY 2004 Result: EPA met its goal, with the increase in river miles largely due to new statewide advisories in 3 states (Washington, Montana, and Wisconsin) due to mercury. These data are a compilation of fish advisory information provided to EPA by 50 states, 3 tribes, Puerto Rico, Guam, and American Samoa, and local governments. The information is voluntarily submitted to EPA in an effort to provide a central repository of fish consumption advisories information for the United States. Monitoring entities determine the scope and extent of monitoring and which waters should be placed under an advisory. Fish advisories are issued in order to inform the public about the recommended level of consumption of fish caught in local waters. The overall increase in waters needing advisories is primarily due to increased sampling of previously untested waters by states and tribes.

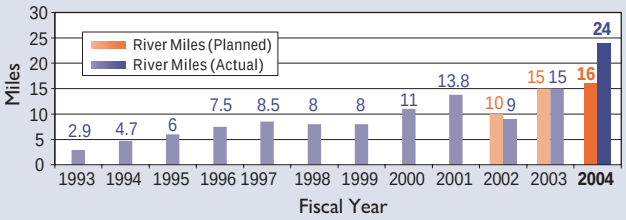
States are also increasingly using risk-based methodologies in determining the need for fish consumption advisories. In calendar year 2002, 45 states reported using risk-based methodologies, an increase from the 15 states that reported using these methodologies in 1999. EPA provides scientific and technical information to enhance state capacity, and develops and disseminates outreach materials for health care professionals in several languages. As a result of following these consumption advisories, the public should be protected from eating contaminated fish in quantities that would be harmful to their health.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 26.

Lake Acres Assessed for the Need for Fish Advisories and Compilation of State-Issued Fish Consumption Advisory Methodologies (cumulative)



River Miles Assessed for the Need for Fish Consumption Advisories and Compilation of State-Issued Fish Consumption Advisory Methodologies (cumulative)



APG 2.5 Increase Information on Beaches

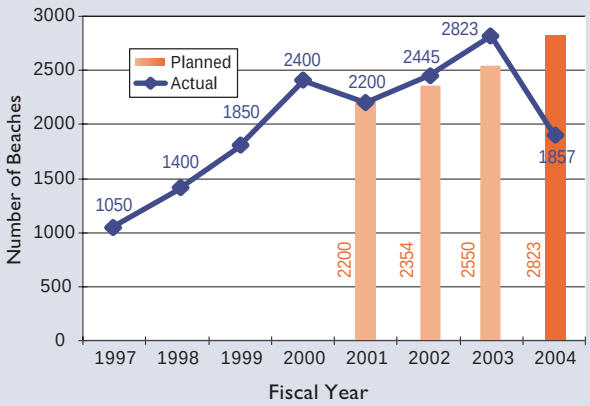
		Planned	Actual
FY 2004	Reduce human exposure to contaminated recreation waters by increasing the information available to the public and decision-makers. Goal Not Met.		
	Performance Measure:		
	Beaches for which monitoring and closure data are available to the public at http://www.epa.gov/OST/beaches/ (cumulative).	2,823	1,857

FY 2004 Result: Calendar year 2003 beach closure data were provided by 227 state agencies for 1,857 beaches. The target of beach closure data for 2,823 beaches was not met due to software compatibility issues with the old and new database systems. The new database system, eBeaches, will allow EPA to collect beach closure and pathogen data from states on a daily basis, a vast improvement over the previous system which reported beach closure information on a yearly basis. The 10 states that currently use STORET as a repository for monitoring data were able to report 2003 data for 1,857 beaches (closure data are available at http://www.epa.gov/waterscience/beaches/). EPA expects the system to be fully operational, allowing all states to report beach closure information, in January 2005.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 27.

Increase Information on Beaches

Reduce human exposure to contaminated recreation waters by increasing the information available to the public and decision-makers.



APG 2.6	Drinking Water Infrastructure (Homeland Security)	Planned	Actual
FY 2004	Enhance homeland security by securing the nation's critical drinking water infrastructure. Goal Not Met.		
	Performance Measures:		
	—Percent of population and number of CWSs serving more than 50,000 but less than 100,000 people have certified the completion of their vulnerability assessment and submitted a copy to EPA.	100%/435	100%/435
	—Percent of population and number of CWSs serving more than 50,000 but less than 100,000 people have certified the completion of the preparation or revision of their emergency response plan.	100%/435	93%/405
	—Percent of population and number of CWSs serving more than 3,300 but less than 50,000 people have certified the completion of their vulnerability assessment and submitted a copy to EPA.	100%/7,641	88%/6,788
FY2003	Enhance public health protection by securing the nation's critical water infrastructures through support for counter-terrorism preparedness. Goal Met.		
	Performance Measure:		
	Percent of the population and the number of community water systems—serving 100,000 or more people—that have certified the completion of the preparation or revision of their emergency response plan.	100%/463	100%/463

FY 2004 Result: EPA met its goal of having virtually all medium community water systems assure that their public water utilities have evaluated their susceptibility to potential threats and identified corrective actions to reduce or mitigate the risk of serious consequences from an intentional act. However, EPA missed its goal of having 100% of medium community water systems certify the completion of emergency response plans (ERP) within 6 months after submitting their vulnerability assessments, consistent with this Public Health Security and Bioterrorism Preparedness and Response Act (Bioterrorism Act) of 2002. Instead of taking an enforcement action against those systems that have not yet submitted their ERPs, the Agency is providing training and technical assistance to those systems making a concerted effort to complete their plans. Currently, EPA is providing on-the-ground technical assistance to those systems that have not yet submitted their ERPs. EPA missed its goal of having small systems certify their vulnerability assessments by June 30, 2004. EPA continues to provide assistance to help small water utilities identify the basic elements of vulnerability assessments and comply with completion, submission, and certification requirements. The tools help systems evaluate their susceptibility to potential threats and identify corrective actions to prepare for and respond to contamination of the nation's water supply. This continued support should expedite small systems' abilities to submit their vulnerability assessments. EPA expects that this number will continue to rise over the next few months since the due date recently passed.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 27.

FY 2003 Result Available in FY 2004: As stated in the Bioterrorism Act, large community water systems were mandated to certify the completion of their emergency response plan (ERP) within 6 months after submitting their vulnerability assessment to EPA. Large community water systems serving more than 100,000 people have now demonstrated that they have response plans in place designed to deal with emergency situations or vulnerabilities discovered through conducting their vulnerability assessments. The public's large water utilities are, therefore, better prepared for a potential threat.

Strategic Objective: Protect the quality of rivers, lakes, and streams on a watershed basis and protect coastal and ocean waters. FY 2004 Cost (in thousands): $2,549,300 (63.5% of FY 2004 Goal 2 Total Costs)

Progress Toward Strategic Objective: EPA, states and tribes, continue to use a watershed approach to protect and improve water quality nationwide, including coastal waters. In 2004, EPA, working with state and tribal partners, established

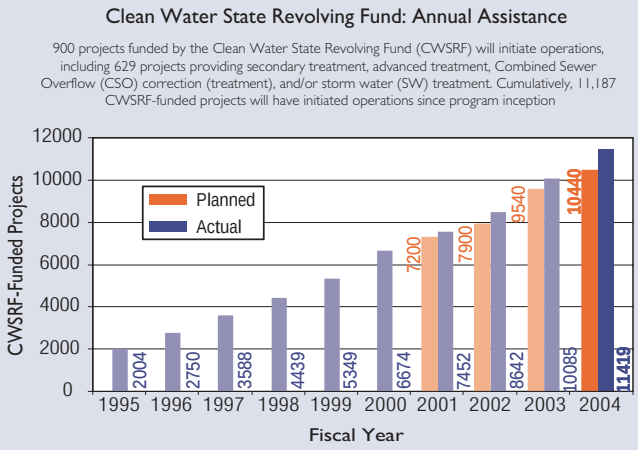
regional and state watershed-improvement targets that consider existing data and planned implementation activities. This approach, combined with a continued emphasis on enhancing state and tribal monitoring and assessment programs, and improving data collection and management efforts to provide meaningful status and trends information, will help to provide a better picture of the condition of the nation's waters.

EPA also continues to promote the use of innovative and flexible approaches, such as trading and watershed-based permitting, to achieve water quality goals. These tools can lead to administrative efficiencies, benefit all watershed stakeholders, and lead to increased environmental results.

APG 2.7 Clean Water State Revolving Fund: Annual Assistance		Planned	Actual
FY 2004	900 projects funded by the Clean Water State Revolving Fund (CWSRF) will initiate operations, including 629 projects providing secondary treatment, advanced treatment, Combined Sewer Overflow (CSO) correction (treatment), and/or storm water (SW) treatment. Cumulatively, 10,440 CWSRF funded projects will have initiated operations since program inception. Goal Met.	10,440	11,419

FY 2004 Result: EPA and the states exceeded the target for FY 2004 by more than 900 projects. The additional projects will reduce pollutant loadings and will result in accelerated environmental protection. The cumulative number of CWSRF projects initiating operations through 2004 is displayed above. These projects facilitate human health protection and pollution control by providing secondary treatment, advanced treatment, combined sewer overflow correction (treatment), and/or stormwater control.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 27.



APG 2.8 State/Tribal Water Quality Standards (WQSs)		Planned	Actual
FY 2004	Assure that states and tribes have effective, up-to-date water quality standards programs adopted in accordance with the regulation and the WQSs program priorities. Goal Met.		
	Performance Measures:		
	—States with new or revised WQSs that EPA has reviewed and approved or disapproved and promulgated federal replacement standards.	20	27
	—Tribes with WQSs adopted and approved (cumulative).	33	25

FY 2004 Result: Achievement of this goal ensures that up-to-date scientifically defensible and robust standards are in place to protect the nation's waters. EPA exceeded its goal by reviewing and approving new or revised water quality standards for 27 states. EPA met the performance goal overall based on the states' standards, which apply to a far larger share of the nation's rivers, lakes, and streams than do the tribal standards. The tribal target was not met primarily due to a Supreme Court decision resulting in EPA revising its tribal

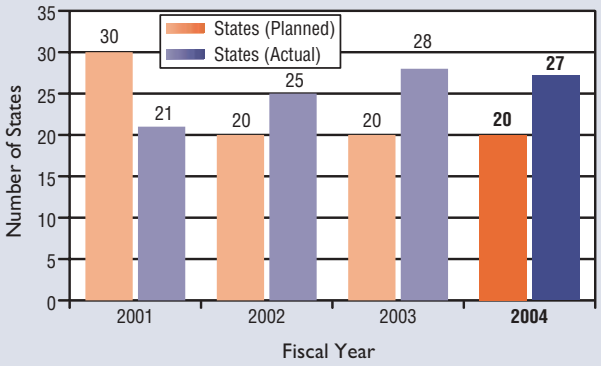
APG 2.8 State/Tribal Water Quality Standards (WQSs) *(continued)*

Planned | Actual

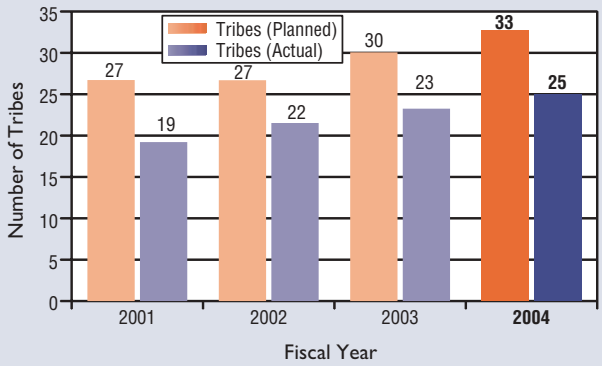
authorization process, which delayed approval of new tribal standards. By the end of FY 2004, a total of 25 tribes had EPA-approved water quality standards. EPA has made significant progress in increasing the number of tribes with water quality standards, and will accelerate progress by increasing the management accountability for EPA actions on treatment as a state (TAS) applications; continuing to provide guidance and assistance, including specialized training, and technical and legal advice, to tribes who have applied or are applying for authority to administer the WQS program, or are developing standards; and continuing to explore the possibility of promulgating federal WQS for tribes that do not have standards in place under the Act.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 28.

States with New or Revised WQSs That EPA Has Reviewed and Approved or Disapproved and Promulgated Federal Replacement Standards



Tribes with WQSs Adopted and Approved (cumulative)



APG 2.9 Watershed Protection

		Planned	Actual
FY 2004	**By 2005, water quality will improve on a watershed basis such that 500 of the nation's 2,262 watersheds will have greater than 80% of assessed waters meeting all water quality standards.**	**500**	Data avail FY 2005
FY 2003	By FY 2003, water quality will improve on a watershed basis such that 600 of the nation's 2,262 watersheds will have greater than 80% of assessed waters meeting all WQSs, up from 500 watersheds in 1998. Goal Not Met.	600	453
FY 2002	Same goal, different targets. Goal Not Met	600	453
FY 2001	Same goal, different targets. Goal Not Met	550	510

FY 2004 Result: EPA relies on states' biennial reporting under Clean Water Act Section 305(b) to assess progress for this measure. EPA's analysis of states' 2004 305(b) reports, which will provide the actual performance data from FYs 2004 and 2005, will be completed by the end of FY 2005.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 28.

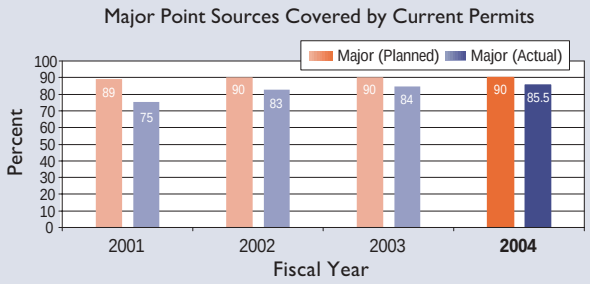
FY 2003 Result Available in FY 2004: EPA and states did not meet the 2003 target for a variety of reasons. Among the most critical, states have broader indication of water quality problems due to new integrated reporting methodologies in accordance with EPA guidance. EPA's and states' abilities to achieve the expected results have also been complicated by the incorporation of new water quality standards for mercury and additional pollutants.

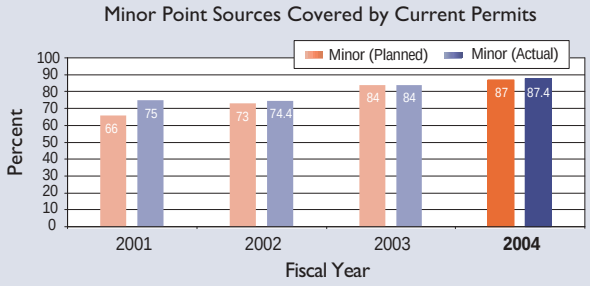
Note: The FY 2003 Annual Report indicated that the data for this measure would be available in 2005. This was an error; the data for FY 2003, reflecting analysis of state 305(b) data from the 2002 reporting cycle, was available in late 2003. Because states' 305(b) water quality data reports are submitted biennially, targets and actuals are the same for each 2-year cycle.

APG 2.10 NPDES Permit Requirements		Planned	Actual
FY 2004	Current national pollutant discharge elimination system (NPDES) permits reduce or eliminate discharges into the nation's waters of (1) inadequately treated discharges from municipal and industrial facilities; and (2) pollutants from urban SW, CSO, and concentrated animal feeding operations (CAFOs). Goal Not Met.		
	Performance Measures:		
	—Major point sources are covered by current permits.	90%	85.5%
	—Minor point sources are covered by current permits.	87%	87.4%
	—Loading reductions (pounds per year) of toxic, non-conventional, and conventional pollutants from NPDES permitted facilities (POTWs, Industries, SIUs, CAFOs, SW, CSOs).	2,750 M	2,336 M

FY 2004 Result: For FY 2004, EPA and the states met the target for the percent of minor point sources covered by current permits. In FY 2004, EPA and states issued permits to achieve 85.5% coverage with current major permits. The continuing challenge of issuing major permits is due to competing priorities and the increasing complexity of permitting in a watershed context. This challenge is being addressed by the Permitting for Environmental Results initiative, which is designed to focus on permits expected to produce the most significant environmental results. An increasing number of states are issuing permits on a watershed basis and incorporating other innovative techniques, such as trading, to address the NPDES backlog and issue permits to reduce or eliminate discharges into the nation's waters. EPA also expects the reduction in pollutant loadings to increase as EPA continues to implement the revised CAFO regulation, and focuses on the most environmentally significant permits.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, pages 28-29.





APG 2.11 Wastewater Treatment Facility Compliance		Planned	Actual
FY 2004	Enhance public health and environmental protection by securing the nation's critical wastewater infrastructure through support for homeland security preparedness, including vulnerability assessments, emergency operations planning, and system operator training. Goal Met.		
	Performance Measures:		
	Percent of the population served by, and the number of large and medium-sized (serving populations of 10,001 and larger) POTWs that have taken action for homeland security preparedness.	75% 8,000	75% 8,000
FY 2003	Same goal, different targets. Goal Met.	65% 5,000	65% 5,000

APG 2.11 Wastewater Treatment Facility Compliance *(continued)*

FY 2004 Result: In FY 2004 an additional 3,000 large and medium-sized publically owned treatment works (POTWs) improved their homeland security preparedness through EPA and state operator assistance training. This brings the cumulative number of wastewater facilities prepared for a potential terrorist threat or other intentional act to 8,000. In order to track this measure, EPA grantees that provide the training report the numbers of utilities trained. EPA then uses the Clean Watersheds Needs Survey and the Permits Compliance System databases to determine and report the population served by each utility.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 29.

Strategic Objective: Provide and apply a sound scientific foundation to EPA's goal of clean and safe water by conducting leading-edge research and developing a better understanding and characterization of the environmental outcomes under Goal 2. FY 2004 Cost (in thousands): $149,571 (3.7% of FY 2004 Goal 2 Total Costs)

Progress Toward Strategic Objective: EPA research continues to provide crucial information for developing effective and protective drinking water standards, including verifying the effectiveness of arsenic treatment technologies and pathogen detection. In FY 2004 EPA provided an improved method for detecting Cryptosporidium in water. The method that is currently used on a widespread basis requires the collection and analysis of two environmental samples, while the new method requires only one environmental sample. This method will allow EPA, states, tribes, and others to more efficiently collect occurrence data on human protozoans in source water[19]. EPA research has also supported Agency efforts to protect the nation's waters so that they support designated uses. In FY 2004, EPA provided important new information on lesion formation in menhaden fish and its relationship to pfiesteria, a toxic dinoflagellate associated with major fish kills about which little is known.[20]

APG 2.12 Drinking Water Research		Planned	Actual
FY 2004	Provide final reports on the performance of arsenic treatment technologies and/or engineering approaches to the Office of Water and water supply utilities to aid in the implementation of the arsenic rule and the protection of human health. Goal Met.	9/30/04	9/30/04

FY 2004 Result: In FY 2004 EPA provided information to utilities, utility consultants and states on the performance and cost of arsenic treatment technologies for drinking water for use in complying with the 2002 arsenic standard of 10 parts per billion. Nearly 97% of the water systems affected by this rule are small systems that serve less than 10,000 people each. These small systems have limited resources and need more cost-effective technologies to meet the new standard. EPA's two completed reports detail the cost to purchase arsenic treatment technologies based on technology demonstrations, and document the performance of arsenic treatment modifications at one of the treatment technology demonstration sites[21]. These demonstrations showed that the total cost of arsenic treatment technologies can vary widely, depending upon the type of technology, design features, and site conditions.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 30.

APG 2.13 Wet Weather Flow Research		Planned	Actual
FY 2004	Provide to states, regions and watershed managers' indicators, monitoring strategies, and guidance for determining the effectiveness of Best Management Practices (BMPs) for wet weather flows in meeting water quality goals. Goal Met.		
	Performance Measures:		
	—Report on fecal indicator monitoring protocols for different types of recreational water.	1 report	1 report
	—Provide guidance on indicator selection and monitoring strategies for evaluating the effectiveness of BMPs.	9/30/04	9/30/04

APG 2.13 Wet Weather Flow Research *(continued)*	Planned	Actual

FY 2004 Result: In FY 2004, EPA completed a report on fecal contamination indicators in recreational waters, and guidance on indicator selection and effectiveness monitoring for best management practices (BMPs). The costs and complexities of meeting water quality goals subject to urban stormwater permits are daunting. The role of BMPs as both an effective and economical means to meet permit requirements remains the central regulatory and non-regulatory approach for restoring much of the nation's degraded water quality in urban environments. The scientific literature and reviews of current design and monitoring practices show that the effectiveness of BMPs varies, is often defined and reported differently, and that monitoring rarely documents biological water quality improvements. EPA's guidance provided in 2004 will provide states, regions and watershed managers with a means for determining the effectiveness of BMPs in meeting water quality goals.[22]

For more information please visit: http://www.epa.gov/ednnrmrl/publish/main.htm. EPA also provided information to states and others for selecting indicators of water quality contamination. In FY 2004, EPA completed a report entitled "The EMPACT Beaches Report–Results from a Study on Microbiological Monitoring in Recreational Waters." This report describes the physical and biological factors that significantly influence the results obtained using microbiological monitoring methods to measure the quality of bathing beach waters, and should improve the quality of data obtained from these monitoring efforts.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 30.

ASSESSMENT OF IMPACTS OF FY 2004 PERFORMANCE ON FY 2005 ANNUAL PLAN:

THERE ARE NO CHANGES TO NEXT YEAR'S PROJECTED PERFORMANCE GOALS ASSOCIATED WITH THIS YEAR'S RESULTS.

Notes

1 U.S. Environmental Protection Agency. *List of Contaminants and Their MCLs*. Available at http://www.epa.gov/safewater/mcl.html#mcls

2 U.S. Environmental Protection Agency. *Drinking Water Data Reliability and Action Plan*. Available at http://www.epa.gov/safewater/data/pdfs/reports_draap_final_2003.pdf

3 More information is available at http://epa.gov/waterscience/fish/advisories/

4 U.S. Environmental Protection Agency, Office of Water. August 2004. EPA-823-F-04-016. EPA Fact Sheet.*National Listing of Fish Advisories*. Available at http://www.epa.gov/waterscience/fish/advisories/factsheet.pdf

5 U.S. Department of Health and Human Services and U.S. Environmental Protection Agency. March 2004. EPA-823-R-04-005. *What You Need To Know About Mercury In Fish and Shellfish*. Available at http://www.epa.gov/waterscience/fishadvice/advice.html

6 U.S. Environmental Protection Agency. Press Release. "Safer Water at Nation's Beaches: New Rule to Protect Against Pathogens." July 2, 2004. Available at http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/9925d96bd2f8555485256ec50058c1b7?OpenDocument

7 U.S. Environmental Protection Agency, Office of Water. July 9, 2004. "Water Quality Standards for Coastal and Great Lakes Waters." *Federal Register* Vol. 69, No. 131, pp 41720-41743. Available at http://www.epa.gov/fedrgstr/EPA-WATER/2004/July/Day-09/w15614.pdf

8 U.S. Environmental Protection Agency, Office of Water. March 2004. *National List of Beaches*. EPA-823-R-04-004. Washington, DC. Available at http://www.epa.gov/waterscience/beaches

9 U.S. Environmental Protection Agency. Press Release. "Bush Administration Commits $10 million to Protect the Nation's Beaches." April 29, 2004. R#080. Available at http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/e30191e77589659985256e850051a36a?OpenDocument

10 U.S. Environmental Protection Agency, Office of Water. August 23, 2004. "Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Products Point Source Category." *Federal Register* Vol. 69, No. 162, pp. 51892-51930. Available at: http://www.epa.gov/fedrgstr/EPA-WATER/2004/August/Day-23/w15530.htm

11 U.S. Environmental Protection Agency, Office of Water. September 8, 2004. "Effluent Limitations Guidelines and New Source Performance Standards for the Meat and Poultry Products Point Source Category." *Federal Register* Vol. 69, No. 173, pp. 544476-54555. Available at http://www.epa.gov/fedrgstr/EPA-WATER/2004/September/Day-08/w12017.htm

12 U.S. Environmental Protection Agency, Office of Water. July 9, 2004. "National Pollutant Discharge Elimination System–Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities." *Federal Register* Vol. 69, No. 131, pp. 415760-41693. Available at http://a257.g.akamaitech.net/7/257/2422/06jun20041800/edocket.access.gpo.gov/2004/04-4130.htm

13 U.S. Environmental Protection Agency, Office of Water. September 2, 2004. "Notice of Availability of 2004 Effluent Guidelines Program Plan." *Federal Register* Vol. 69, No. 170, pp 53705-53721. Available at http://www.epa.gov/fedrgstr/EPA-WATER/2004/September/Day-02/w20040.htm

14 Loading reductions are calculated using a spreadsheet maintained by the Office of Science and Technology. U.S. Environmental Protection Agency, Office of Science and Technology. Updated 2004. *Loadings Reduction Spread Sheet for Direct Discharges from Point Sources Subject to Effluent Guidelines*. Unpublished Lotus 1-2-3 spread sheet.

Issuance of major permits (individual and non-storm water general permits) and individual minor permit issuance is tracked using the Permit Compliance System. U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance, Permit Compliance System (database).

Non-storm water general permit issuance for minor permits is tracked using the Permit Issuance Forecasting Tool. U.S.Environmental Protection Agency, Office of Wastewater Management. Permit Issuance Forecasting Tool (database).

15 U.S. Environmental Protection Agency, Office of Water. December 2003.*Watershed-Based NPDES Permitting Implementation Guidance*. EPA-83333-B-03-004. Washington, DC. Available at http://www.epa.gov/npdes/publications

16 Refer to*Sustained Progress in Addressing Management Issues* available at http://www.epa.gov/ocfo/finstatement/2004ar/2004ar.htm

17 *Achieving Environmental Excellence: An Environmental Management Systems Handbook for Wastewater Utilities* is available at http://www.peercenter.net, http://www.epa.gov/ow, or http://www.epa.gov/ems

18 *Continual Improvement in Utility Management: A Framework for Integration* is available at http://www.wef.org and http://www.peercenter.net

19 Francy D. S., Simmons O.D., Ware M.W., Granger E.J., Sobsey M.D., and Schaefer F.W. Effects of spiking procedures and water quality on recovery of Cryptosporidium in stream water using USEPA Method 1623.

20 Choich, J., J.D. Salierno, E.K. Silbergeld, and A.S. Kane. "Altered brain activity in brevetoxin-exposed bluegill, *Lepomis macrochirus*, visualized using in vivo 14C 2-deoxyglucose labeling." Environmental Research 94 (2004) 192-197. Researchers found that a certain water mold, A. invadans, was the causative agent responsible for the development of characteristic lesions on menhaden that were formerly ascribed to Pfiesteria, and causes significant mortality in infected fish.

21 For more information, please visit http://www.epa.gov/etv.

22 Clar, M., B. Barfield, and T.P. O'Connor. "Stormwater Best Management Design Guide: Volume 1 General Considerations" EPA 600/R-04/121, Volume 2 EPA 600/R-04/121A, and Volume 3 EPA 600/R-04/121B. For more information, please visit http://www.epa.gov/ednnrmrl/publish/main.htm.